

What Is Claimed Is:

1. A liquid crystal display apparatus comprising a pair of substrates disposed so as to face each other with interposition of a liquid crystal layer, at least one of the substrates is a flexible substrate, wherein many concave faces having the inner surface that is a part of the spherical surface are formed continuously on the surface of at least one substrate out of the pair of substrates that is facing to the liquid crystal layer side.

2. The liquid crystal display apparatus according to claim 1, wherein the depth of a concave ranges from 0.1  $\mu\text{m}$  to 3  $\mu\text{m}$ , the inclination distribution of the inner surface of a concave ranges from -30 degrees to +30 degrees, and the pitch between adjacent concaves ranges from 5  $\mu\text{m}$  to 50  $\mu\text{m}$ .

3. The liquid crystal display apparatus according to claim 1, wherein a metal reflection film is formed on the substrate surface on which many concaves having the inner surface that is a part of the spherical surface are formed continuously.

4. The liquid crystal display apparatus according to claim 3, wherein the film thickness of the metal reflection film ranges from 80  $\text{\AA}$  to 300  $\text{\AA}$ .

5. The liquid crystal display apparatus according to claim 3, wherein the film thickness of the metal reflection film ranges from 80  $\text{\AA}$  to 100  $\text{\AA}$ .

6. The liquid crystal display apparatus according

to claim 3, wherein a color filter is formed directly on the metal reflection film.

7. The liquid crystal display apparatus according to claim 1, wherein the substrate surface on which many concaves having the inner surface that is a part of the spherical surface are formed continuously is colored.

8. The liquid crystal display apparatus according to claim 1, wherein the flexible substrate consists of polyallylate base, polycarbonate base, polyethersulphone base, or polyethylene terephthalate base resin.